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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/655,881	09/06/2000	Shigeru Wakashiro	P19589	8885

7055 7590 06/18/2003
GREENBLUM & BERNSTEIN, P.L.C.
1950 ROLAND CLARKE PLACE
RESTON, VA 20191

EXAMINER

KIBLER, VIRGINIA M

ART UNIT	PAPER NUMBER
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2623

DATE MAILED: 06/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/655,881

Applicant(s)

WAKASHIRO, SHIGERU

Examiner

Virginia M Kibler

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1, 3 and 5 is/are rejected.
- 7) ☒ Claim(s) 2, 4 and 6 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 September 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3. 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3, and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaneko et al. (6,304,669) in view of Kim (5,832,106).

Regarding claim 1, Kaneko et al. ("Kaneko") discloses an image processing computer system for a photogrammetric analytical measurement including a target-image extractor that extracts the image of the target from the picture (Col. 5, lines 11-15) based on positional relationships between the main reference point areas of the target (Col. 3, lines 48-55). Note, Kaneko does not explicitly recognize including an assistant reference point. However, Kaneko discloses including at least three main reference points (Abstract, lines 3-5), thereby including the use of an assistant reference point. Kaneko further discloses an image processor that processes the extracted image of the target to determine a 2-D position of each reference point area of the target with respect to a 2-D picture coordinate system defined on the image (Col. 5, lines 11-23), a first calculator that calculates the 3-D positions of the reference points with respect to a 3-D camera coordinate system defined on the camera (Col. 6, lines 18-53), and a second calculator that calculates 2-D positions of the reference points with respect to a 2-D image-plane coordinate system, defined on an image-plane of the camera, based on the 3-D positions of the main reference point areas calculated by the first calculator (Col. 8, lines 60-65). Kaneko does not

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appear to recognize calculating the camera parameters based on the 2-D positions of the reference points with respect to the 2-D picture coordinate system and the 2-D positions of the reference point areas with respect to the 2-D image-plane coordinate system. However, Kim teaches that it is known to calculate the camera parameters based on the 2-D positions of the reference points with respect to the 2-D picture coordinate system and the 2-D positions of the reference point areas with respect to the 2-D image-plane coordinate system (Col. 3, lines 29-35). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the 2-D positions of the reference points with respect to the 2-D picture coordinate system and the 2-D image-plane coordinate system as disclosed by Kaneko to include the calculation of the camera parameters, as taught by Kim, in order to compensate for the inaccurate characteristics of the camera (Col. 1, lines 28-35).

Regarding claims 3 and 5, the arguments analogous to those presented above for claim 1 are applicable to claims 3 and 5.

Allowable Subject Matter

3. Claims 2, 4, and 6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Pat. No. 5,757,674 to Marugame for 3-D position detecting apparatus;

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U.S. Pat. No. 6,101,455 to Davis for automatic calibration of cameras and structured light sources;

U.S. Pat. No. 6,144,761 to Kaneko et al. for photogrammetric analytical measurement system;

U.S. Pat. No. 6,108,497 to Nakayama et al. for standard measurement scale and markers for defining standard measurement scale; and

U.S. Pat. No. 6,437,823 to Zhang for calibrating digital cameras.


Contact Information

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Virginia M Kibler whose telephone number is (703) 306-4072. The examiner can normally be reached on Mon. - Thurs. 8:00 - 5:30 and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on (703) 308-6604. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-0377.

VK
June 10, 2003


AMELIA M. AU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600